

# **EAST GREENACRES IRRIGATION DISTRICT (PWSNO 1280064) SOURCE WATER ASSESSMENT REPORT**

---

**September 19, 2001**



## **State of Idaho Department of Environmental Quality**

**Disclaimer:** This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on the data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the state of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

## Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This risk assessment is based on a land use inventory in the well recharge zone, sensitivity factors associated with how the well was constructed, and aquifer characteristics.

This report, *Source Water Assessment for East Greenacres Irrigation District*, describes the public drinking water wells; the well recharge zone and potential contaminant sites located inside the recharge zone boundaries. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this public water system. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

East Greenacres Irrigation District drinking water is supplied by 14 wells in three well fields pumping from the Rathdrum Prairie Aquifer. The water system serves a population of about 4040 people west of Post Falls, Idaho. Historically, East Greenacres Irrigation District has had few water quality problems. Nitrate concentrations in samples from all three well fields were elevated (but still below the Maximum Contaminant Level) in the mid 1990s, and have decreased since. The district has experienced isolated instances of microbial contamination in the distribution system.

Well Fields I and III ranked highly susceptible to all classes of regulated contaminants in a ground water Susceptibility Analysis DEQ conducted July 17, 2001. Well Field II is moderately susceptible to microbial contamination and highly susceptible to inorganic, synthetic and volatile organic chemical contamination. Risk factors associated with the geology of the Rathdrum Prairie Aquifer are the main contributors to the high susceptibility scores.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Because 186 public water systems in Idaho draw water from the Rathdrum Prairie Aquifer, they should consider forming a regional group to represent their interests before state, county and municipal governing bodies when regulatory tools like zoning overlays, or enactment of building codes are the most appropriate ground water protection measures. Partnerships with state and local agencies and industry groups should also be established. Agriculture and the railroads, for instance, are important players in the East Greenacres well field recharge zones.

Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. For assistance in developing protection strategies, please contact your regional Department of Environmental Quality office or the Idaho Rural Water Association.

# SOURCE WATER ASSESSMENT FOR EAST GREENACRES IRRIGATION DISTRICT

## Section 1. Introduction - Basis for Assessment

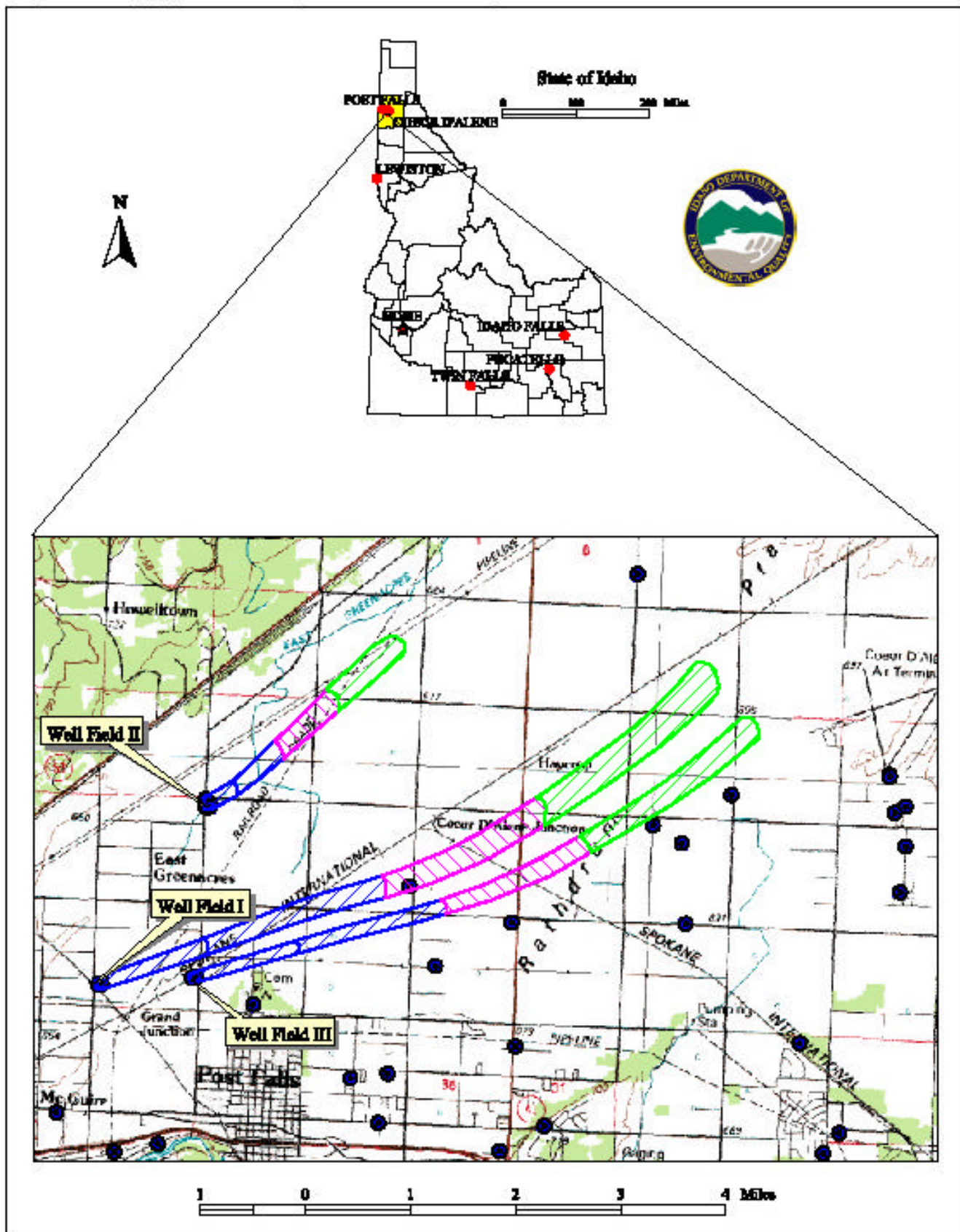
The following sections contain information necessary for understanding how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and an inventory of significant potential sources of contamination identified within that area are included. The ground water susceptibility analysis worksheets used to develop this assessment are attached.

### Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess every public drinking water source in Idaho for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. These assessments are based on a land use inventory inside the delineated recharge zones, sensitivity factors associated with how the well is constructed, and aquifer characteristics. The state must complete more than 2900 assessments by May of 2003. Because resources and the time available to accomplish assessments are limited, an in-depth, site-specific investigation for every public water system is not possible.

**The results of the source water assessment should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.** The ultimate goal of this assessment is to provide data to local communities for developing a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

**Figure 1. Geographic Location of East Greenacres Irrigation District**



## Section 2. Preparing for the Assessment

### Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a well or well field that will become the focal point of the assessment. The process includes mapping the boundaries of the well recharge area into time of travel zones indicating the number of years necessary for a particle of water in the aquifer to reach a well. DEQ used a refined computer model approved by the EPA to determine the time of travel (TOT) for water pumped from the Rathdrum Prairie Aquifer. The computer model used data assimilated by DEQ from a variety of sources including volume estimates for East Greenacres Irrigation District wells prepared by Paul Baker in 1999.

East Greenacres Irrigation District is a community water system with 1616 connections serving about 4040 people in the area west of Post Falls, Idaho (Figure 1). Water for domestic use, fire protection and irrigation is supplied by 14 wells in three well fields. The delineated source water assessment areas for East Greenacres Irrigation District curve northeastward from the well fields. The delineation for Well Field I is 6.6 miles long and encompasses about 972 acres; the delineation for Well Field II is about 6 miles long and encompasses 640 acres. The Well Field III delineation includes 301 acres in a corridor about 2.4 miles long (Figure 2). All of the delineations are divided into 0-3, 3-6, and 6-10 year time of travel zones.

### Identifying Potential Sources of Contamination

The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. Inventories for public water systems in Idaho were conducted in two-phases. The first phase involved identifying and documenting potential contaminant sources within the source water assessment delineations through the use of computer databases and Geographic Information System maps developed by DEQ. A map showing the delineations and a table summarizing the results of the database search were then sent to system operators for review and correction during the second or enhanced phase of the inventory process. Information from the public water system file was also incorporated into the potential contaminant inventory. Paul Baker completed the enhanced inventories for the East Greenacres Irrigation District well fields.

Figure 2, *East Greenacres Irrigation District Delineation and Potential Contaminant Inventory* on page 8 of this report shows the location of the East Greenacres Irrigation District wells, and the zones of contribution DEQ delineated for them. Land use in the well recharge zones is primarily agricultural. Homes in the area are either on the Post Falls sewage system or have individual septic systems. Highway 41 and railroads cross the delineations for Well Fields I and III. A petroleum pipeline and railroad cross the boundaries of the Well Field II delineation. Table 2 on page 9 summarizes information about the numbered potential contaminant sites inside the delineated areas on the map.

Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. When a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation.

### **Section 3. Susceptibility Analysis**

The susceptibility to contamination of all ground water sources in Idaho is being assessed on the following factors:

- physical integrity of the well,
- hydrologic characteristics,
- land use characteristics, and potentially significant contaminant sources
- historic water quality

The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. A high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility rankings for the East Greenacres Irrigation District well fields. A Susceptibility Analysis Work Sheet is usually completed for each well, but in this case the wells were grouped because driller's reports with lithologic data, casing and surface seal details specific to each well are not available.

#### **Well Construction**

Well construction directly affects the ability of the wells to protect the aquifer from contaminants. Lower scores imply a well that can better protect the water. This portion of the susceptibility analysis relies on information from individual well logs, when available, and from the most recent sanitary survey of the public water system. A sanitary survey conducted August 3, 2000 found the East Greenacres Irrigation District water system to be well run and in compliance with *Idaho Rules for Public Drinking Water Systems*. The well head and surface seals on all the wells were maintained as required by the *Rules*.

Table 1, compiled from information submitted by Paul Baker (with numbers rounded) shows that the difference between the static water level and the well screen depth is less than 100 feet in all but Wells 2-C and 2-E. Water drawn from more than 100 feet below the static water level is typically buffered from potential contaminants introduced at the land surface.

**Table 1. Selected Characteristics of East Greenacres Irrigation District Wells**

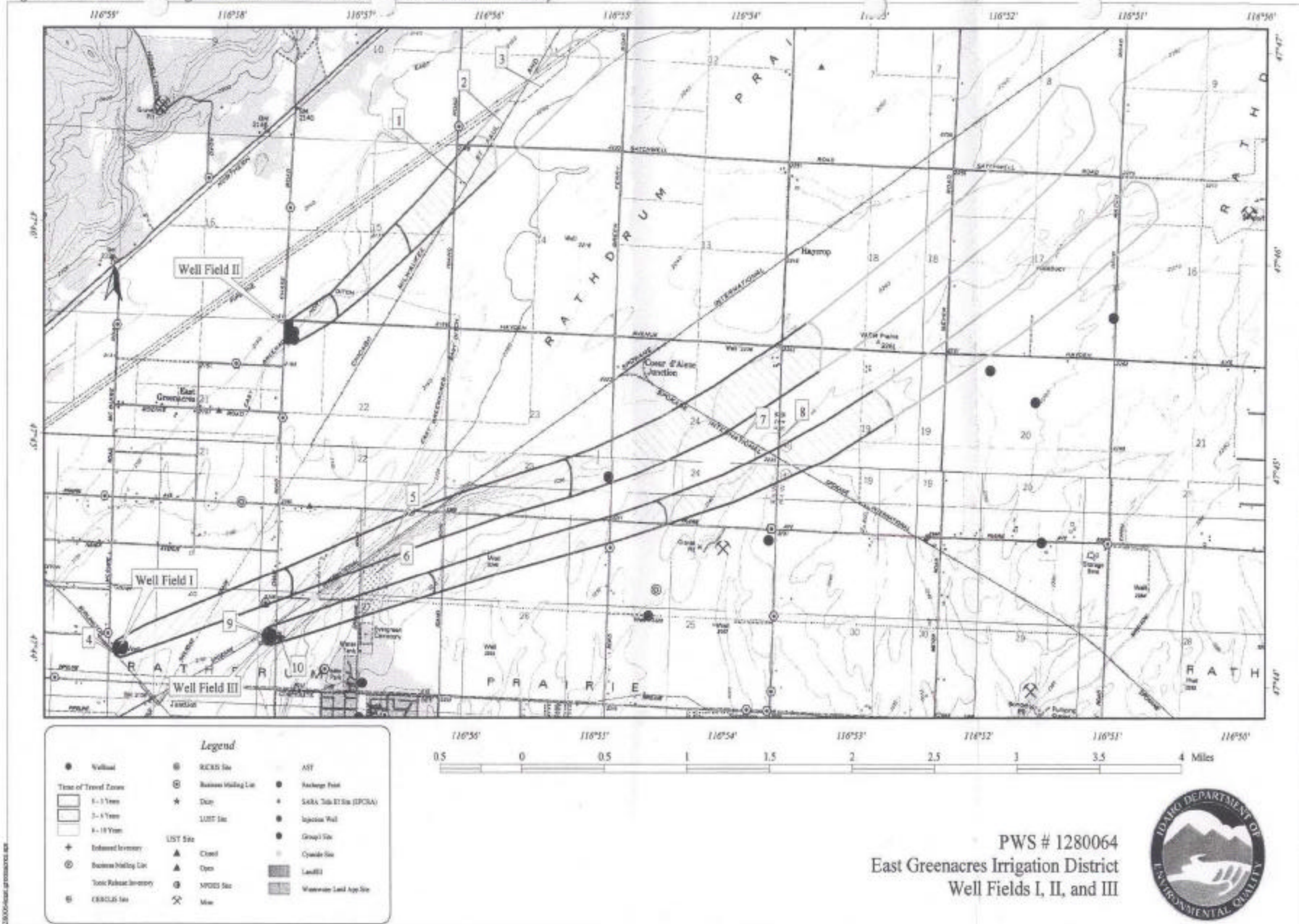
Well	Capacity (GPM)	Total Depth (ft)	Static Water Level (ft)	Top of Screen (ft)
Well Field I				
1-A	3920	256	178	218
1-B	3870	257	165	218
1-D	2132	240	167	217
1-E	428	241	166	216
1-F	2058	256	166	231
Well Field II				
2-A	3810	280	176	246
2-B	1960	277	177	252
2-C	3790	326	176	278
2-D	3830	291	188	258
2-E	2110	330	195	311
Well Field III				
3-A	3958	273	167	227
3-B	3614	270	168	230
3-C	1710	255	170	231

### Hydrologic Sensitivity

Hydrologic sensitivity scores reflect natural geologic conditions at the well site and in the recharge zone. Information for this part of the analysis is derived from individual well logs and from the soil drainage classification inside the delineation boundaries. Soils in the recharge zones as a whole are well drained. Poorly drained to moderately well drained soils are deemed more protective of ground water than soils which drain faster. The depth to ground water in all the wells is less than 300 feet, providing less protection from potential contaminants through adsorption and other mechanisms than a deeper water table. Without the driller's reports for the wells, composition of the soils above the water table is not known.



Figure 2. East Greenacres Irrigation District Delineation and Potential Contaminant Inventory.





## Potential Contaminant Sources and Land Use

**Well Field I.** Land use inside the Well Field I recharge zone is primarily irrigated agriculture. Significant sources of potential contaminants in the 0-3- year time of travel zone include railroads and a golf course. One set of tracks is within 200 feet of the well field. Local roads were not counted in the susceptibility analysis because they carry a relatively low volume of traffic. In the 3-6 year time of travel zone for Well Field I, the most important potential contaminant sources are State Highway 41 and the railroad.

**Well Field II.** Irrigated agriculture is the main land use inside the Well Field II recharge zone boundaries. The Greenacres North Ditch shown on Geological Survey maps of the area is not mentioned as a potential contaminant source in DEQ site inspection reports, so it was not counted in the susceptibility analysis. A railroad line crosses the 3-6-year time of travel zone for Well Field II. The railroad and a petroleum pipeline are significant potential contaminant sources in the 6-10-year time of travel zone.

**Well Field III.** Geological Survey Maps show a rail line less than 200 feet northwest of Well Field III. There is a large sewer lift station with an overflow disposal pond near the corner of Chase and Cavalry Roads , about 200 feet from the well field. A storm water disposal swale is on the same site. A golf course lying partially within the 0-3 year time of travel zone for the well field is about 0.6 miles distant. Rail lines and State Highway 41 cross the 6-10 year time of travel zone and are the only other notable potential contaminant sources documented inside the well field recharge zone. Table 2 summarizes information about the potential contaminant sites inventoried inside the well field delineations.

**Table 2. East Greenacres Irrigation District Potential Contaminant Inventory**

MAP ID NUMBER	SITE DESCRIPTION	SOURCE OF INFORMATION	POTENTIAL CONTAMINANTS <sup>1</sup>
1	Railroad	USGS Maps	IOC, SOC, VOC, Microbial
2	Railroad	USGS Maps	IOC, SOC, VOC, Microbial
3	Petroleum Pipeline	USGS Maps	SOC, VOC
4	Railroad	USGS Maps	IOC, SOC, VOC, Microbial
5	Railroad	USGS Maps	IOC, SOC, VOC, Microbial
6	Golf Course	Enhanced Inventory	IOC, SOC, VOC
7	Railroad	USGS Maps	IOC, SOC, VOC, Microbial
8	State Highway 41	USGS Maps	IOC, SOC, VOC, Microbial
9	Railroad	USGS Maps	IOC, SOC, VOC, Microbial
10	Sewage Lift Station	Enhanced Inventory	IOC, Microbial

<sup>1</sup> IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

## Historic Water Quality

East Greenacres Irrigation District has experienced some isolated instances of microbial contamination, apparently entering the water through the distribution system. The system runs a chlorinator once a year until a free chlorine residual is detected throughout the water system.

Synthetic and volatile organic compounds have never been detected in the wells. Waivers for reduced monitoring for the compounds were granted for the current period. Radiological contaminants in concentrations far below Maximum Contaminant Level (MCL) have been present since testing began in 1979. Nitrate has been detected in Well Field I in concentrations ranging between 0.92 and 4.0 mg/l. In Well Field

II the nitrate concentration has fluctuated from 1.48 to 4.8 mg/l. The range of nitrate concentrations in Well Field III has been from 1.56 to 4.7 mg/l. The MCL for nitrate is 10 mg/l. All of the highest nitrate concentrations were detected between 1994 and 1998. Results for the year 2000 show nitrate concentrations in all the well fields below 2 mg/l.

Arsenic (MCL= 0.05 mg/l) was present at a concentration of 0.005 mg/l in samples from Well Field I in 1984 and 1987. It was not detected when the water was tested for inorganic chemicals in 1994. A trace amount of thallium and fluoride at 0.200 mg/l (MCL = 4 mg/l) were detected in a sample from Well Field III in 1997.

### Final Susceptibility Ranking

The East Greenacres Irrigation District Well Fields I and III ranked highly susceptible to all classes of regulated contaminants. Well Field II is moderately susceptible to microbial contaminants and highly susceptible to IOC, SOC and VOC contamination. For all of the well fields natural risk factors associated with the geology of the Rathdrum Prairie Aquifer added the most points the final scores. Totals for system construction and hydrologic sensitivity along with the cumulative scores for land use and potential contaminant sites are summarized on Table 3.

**Table 3. Summary of East Greenacres Irrigation District Susceptibility Evaluation**

<b>Cumulative Susceptibility Scores</b>						
	System Construction	Hydrologic Sensitivity	Contaminant Inventory			
			IOC	VOC	SOC	Microbial
Well Field I	4	6	18	18	18	8
Well Field II	4	6	13	13	13	6
Well Field III	4	6	19	16	16	8
<b>Final Susceptibility Ranking</b>						
	IOC	VOC	SOC	Microbial		
Well Field I	High	High	High	High		
Well Field II	High	High	High	Moderate		
Well Field III	High	High	High	High		

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Hydrologic sensitivity, land use with associated potential contaminant sources, and well construction integrity are considered to have equal importance in the susceptibility rating. However, the susceptibility analysis can allocate up to 30 points for potential contaminant/land use factors compared with a maximum of 6 points for hydrologic factors and 6 points for well construction. For this reason the potential contaminant/land use scores are normalized before tallying the final susceptibility scores. The final susceptibility scores are determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

The final ranking categories are as follows:

- 0 - 5            Low Susceptibility
- 6 - 12          Moderate Susceptibility
- > 13           High Susceptibility

## **Section 4. Options for Source Water Protection**

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. The state and local health districts have instituted enhanced protection of the ground water in the Rathdrum Prairie Aquifer because of its high use and uniquely pristine water quality. The protections are generally aquifer wide and are not aimed at zones of contribution to a specific well or water system. *The Spokane Valley-Rathdrum Prairie Atlas*, sent to water systems on the prairie when they were invited to perform an enhanced contaminant inventory, describes some of the regional protection measures.

The 186 public water systems in Idaho that draw water from the Rathdrum Prairie Aquifer should consider forming a regional group to represent their interests before state, county and municipal governing bodies when regulatory tools like zoning overlays, or enactment of building codes are the most appropriate ground water protection measures. These types of measures could be used to protect the capture zones of a specific system or group of wells that could be put at risk from local land use changes.

Partnerships with state and local agencies and industry groups should also be established. For instance, source water protection activities related to agriculture, an important land use in the East Greenacres Irrigation District well recharge zones, should be coordinated with the Idaho State Department of Agriculture, local Soil Conservation District, and the Natural Resources Conservation Service.

In its own service area, East Greenacres Irrigation District should continue the excellent maintenance and operations programs noted during inspections since the system's inception. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

## **Assistance**

Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Coeur d'Alene Regional DEQ Office     (208) 769-1422

State IDEQ Office                                 (208) 373-0502

Website: <http://www.deq.state.id.us/>

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper, Idaho Rural Water Association, at (208) 343-7001 for assistance with drinking water (formerly wellhead protection) strategies.

## References Cited

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

Idaho Department of Agriculture, 1998. Unpublished Data.

Idaho Division of Environmental Quality, 1994. Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho. Ground Water Quality Technical Report No. 5. Idaho Division of Environmental Quality. December 1994.

Idaho Division of Environmental Quality, 1996. Lower Payette River Agriculture Irrigation Water Return Study and Ground Water Evaluation, Payette County, Idaho. Water Quality Status Report No. 115.

Idaho Department of Environmental Quality, 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.

Idaho Department of Environmental Quality, 2000. City of Fruitland Wellhead Viability Project 319 Grant Final Report July 2000.

Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

Natural Resource Conservation Service, 1991. Idaho Snake-Payette Rivers Hydrologic Unit Plan of Work. March 1991.

United States Geological Survey, 1986. Quality of Ground Water in the Payette River Basin, Idaho. United States Geological Survey. Water Resources Investigation Report 86-4013.

University of Idaho. 1986. Ground Water Resources in a Portion of Payette County, Idaho. Idaho Water Resources Research Institute. University of Idaho. Moscow, Idaho. April 1986.

## Attachment A

# East Greenacres Irrigation District Susceptibility Analysis Worksheets



## Ground Water Susceptibility

Public Water System Name : **EAST GREENACRES WATER DIST**

Source: **WELL FIELD I**

Public Water System Number : **1280064**

7/19/01 8:06:24 AM

1. System Construction		SCORE			
Drill Date	Unknown				
Driller's Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES 2000				
Well meets IDWR construction standards	Unknown	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	Unknown	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
<b>Total System Construction Score</b>		<b>4</b>			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	Unknown	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	Unknown	2			
<b>Total Hydrologic Score</b>		<b>6</b>			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		Score	Score	Score	Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
<b>Total Potential Contaminant Source/Land Use Score - Zone 1A</b>		<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
Potential Contaminant / Land Use - ZONE 1B ( 3 YR. TOT)					
Contaminant sources present (Number of Sources)	YES	2	2	2	1
(Score = # Sources X 2 ) 8 Points Maximum		4	4	4	2
Sources of Class II or III leacheable contaminants or Microbials	YES	2	2	2	
4 Points Maximum		2	2	2	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Greater Than 50% Irrigated Agricultural Land	4	4	4	4
<b>Total Potential Contaminant Source / Land Use Score - Zone 1B</b>		<b>10</b>	<b>10</b>	<b>10</b>	<b>6</b>
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Land Use Zone II	Greater Than 50% Irrigated Agricultural Land	2	2	2	
<b>Potential Contaminant Source / Land Use Score - Zone II</b>		<b>5</b>	<b>5</b>	<b>5</b>	<b>0</b>
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	YES	1	1	1	
<b>Total Potential Contaminant Source / Land Use Score - Zone III</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>
<b>Cumulative Potential Contaminant / Land Use Score</b>		<b>18</b>	<b>18</b>	<b>18</b>	<b>8</b>
<b>4. Final Susceptibility Source Score</b>		<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>
<b>5. Final Well Ranking</b>		High	High	High	High

## Ground Water Susceptibility

Public Water System Name : **EAST GREENACRES WATER DIST**

Source: **Well Field II**

Public Water System Number : **1280064**

7/19/01 8:06:48 AM

1. System Construction		SCORE			
Drill Date	UNKNOWN				
Driller's Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES 2000				
Well meets IDWR construction standards	UNKNOWN	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	UNKNOWN	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
<b>Total System Construction Score</b>		<b>4</b>			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	UNKNOWN	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	UNKNOWN	2			
<b>Total Hydrologic Score</b>		<b>6</b>			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		Score	Score	Score	Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
<b>Total Potential Contaminant Source/Land Use Score - Zone 1A</b>		<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
Potential Contaminant / Land Use - ZONE 1B ( 3 YR. TOT)					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2 ) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Greater Than 50% Irrigated Agricultural Land	4	4	4	4
<b>Total Potential Contaminant Source / Land Use Score - Zone 1B</b>		<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Land Use Zone II	Greater Than 50% Irrigated Agricultural Land	2	2	2	
<b>Potential Contaminant Source / Land Use Score - Zone II</b>		<b>5</b>	<b>5</b>	<b>5</b>	<b>0</b>
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
<b>Total Potential Contaminant Source / Land Use Score - Zone III</b>		<b>2</b>	<b>2</b>	<b>2</b>	<b>0</b>
<b>Cumulative Potential Contaminant / Land Use Score</b>		<b>13</b>	<b>13</b>	<b>13</b>	<b>6</b>
<b>4. Final Susceptibility Source Score</b>		<b>13</b>	<b>13</b>	<b>13</b>	<b>12</b>
<b>5. Final Well Ranking</b>		High	High	High	Moderate

**Ground Water Susceptibility**Public Water System Name : **EAST GREENACRES WATER DIST**Source: **WELL FIELD III**Public Water System Number : **1280064**

7/19/01 8:07:06 AM

<b>1. System Construction</b>		<b>SCORE</b>			
Drill Date	UNKNOWN				
Driller's Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES 2000				
Well meets IDWR construction standards	UNKNOWN	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	UNKNOWN	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
<b>Total System Construction Score</b>		<b>4</b>			
<b>2. Hydrologic Sensitivity</b>					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	UNKNOWN	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	UNKNOWN	2			
<b>Total Hydrologic Score</b>		<b>6</b>			
		IOC	VOC	SOC	Microbial
<b>3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)</b>		Score	Score	Score	Score
Land Use Zone 1A	IRRIGATED CROPLAND	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
<b>Total Potential Contaminant Source/Land Use Score - Zone 1A</b>		<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Potential Contaminant / Land Use - ZONE 1B ( 3 YR. TOT)</b>					
Contaminant sources present (Number of Sources)	YES	3	2	2	2
(Score = # Sources X 2 ) 8 Points Maximum		6	4	4	4
Sources of Class II or III leacheable contaminants or Microbials	YES	3	2	2	
4 Points Maximum		3	2	2	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	25 to 50% Irrigated Agricultural Land	2	2	2	2
<b>Total Potential Contaminant Source / Land Use Score - Zone 1B</b>		<b>11</b>	<b>8</b>	<b>8</b>	<b>6</b>
<b>Potential Contaminant / Land Use - ZONE II (6 YR. TOT)</b>					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
Land Use Zone II	Greater Than 50% Irrigated Agricultural Land	2	2	2	
<b>Potential Contaminant Source / Land Use Score - Zone II</b>		<b>5</b>	<b>5</b>	<b>5</b>	<b>0</b>
<b>Potential Contaminant / Land Use - ZONE III (10 YR. TOT)</b>					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	YES	1	1	1	
<b>Total Potential Contaminant Source / Land Use Score - Zone III</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>
<b>Cumulative Potential Contaminant / Land Use Score</b>		<b>19</b>	<b>16</b>	<b>16</b>	<b>8</b>
<b>4. Final Susceptibility Source Score</b>		<b>14</b>	<b>13</b>	<b>13</b>	<b>13</b>
<b>5. Final Well Ranking</b>		High	High	High	High

## POTENTIAL CONTAMINANT INVENTORY

### LIST OF ACRONYMS AND DEFINITIONS

**AST (Aboveground Storage Tanks)** – Sites with aboveground storage tanks.

**Business Mailing List** – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

**CERCLIS** – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

**Cyanide Site** – DEQ permitted and known historical sites/facilities using cyanide.

**Dairy** – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

**Deep Injection Well** – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

**Enhanced Inventory** – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

**Floodplain** – This is a coverage of the 100-year floodplains.

**Group 1 Sites** – These are sites that show elevated levels of contaminants and are not within the priority one areas.

**Inorganic Priority Area** – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

**Landfill** – Areas of open and closed municipal and non-municipal landfills.

**LUST (Leaking Underground Storage Tank)** – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

**Mines and Quarries** – Mines and quarries permitted through the Idaho Department of Lands.)

**Nitrate Priority Area** – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

**NPDES (National Pollutant Discharge Elimination System)** – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

**Organic Priority Areas** – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

**Recharge Point** – This includes active, proposed, and possible recharge sites on the Snake River Plain.

**RICRIS** – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

**SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities)** – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

**Toxic Release Inventory (TRI)** – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

**UST (Underground Storage Tank)** – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

**Wastewater Land Applications Sites** – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

**Wellheads** – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

**NOTE:** Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.